

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (**Currently Amended**): A process for the blind demodulation of a linear-waveform source or transmitter in a system ~~comprising~~ including one or more sources and an array of sensors and a propagation channel, said process ~~wherein~~ comprising steps of:

determining symbol ~~the symbol~~ period  $T$  ~~is determined~~ and samples are taken and taking samples at  $T_e$ , such that  $T = IT_e$ , wherein  $I$  is an integer number and  $T_e$  is the sampling period;

constructing a spatio-temporal observation  $z(t)$ , the mixed sources of which are symbol trains from the transmitter, ~~is constructed~~ from the observations  $x(kT_e)$ ;

applying an ICA-type ~~Independent Component Analysis (ICA) – type~~ method is applied to the observation vector  $z(t)$  in order to estimate the  $L_c$  symbol trains  $\{a_{m-i}\}$  that are associated with the channel vectors  $\hat{h}_{z,j} = \hat{h}_z(k_j)$ ;

arranging the  $L_c$  outputs  $(\hat{a}_{m,i}, \hat{h}_{z,i})$  ~~are arranged~~ in the same order as the inputs  $(a_{m-i}, h_z(i))$  so as to obtain the propagation channel vectors  $\hat{h}_{z,j} = \hat{h}_z(k_j)$ ; and

determining the phase  $\alpha_{i\max}$  associated with the outputs ~~is determined~~.

2. (**Currently Amended**): The process as claimed in claim 1, further comprising estimating ~~wherein the~~ propagation channel parameters ~~are estimated~~ in order to determine the carrier frequency so as to compensate for the symbol trains in order to obtain them in baseband.

3. (**Currently Amended**): The process as claimed in claim 1, ~~wherein it~~ includes further comprising a step of estimating the angle  $\theta_p$  and delay  $\tau_p$  parameters of the propagation channel.